

AMENDMENTS TO THE CLAIMS

Please amend the claims as shown below. A complete listing of the claims, including their status identifier, is set forth below.

1-131 (Canceled)

132. (New) A method comprising:

- (a) contacting a candidate compound with a G protein-coupled receptor comprising an amino acid sequence having at least 90% identity to SEQ ID NO:3, wherein said GPCR is present on a cell or isolated membrane thereof;
- (b) determining the ability of the compound to modulate the G protein-coupled receptor; and
- (c) determining if said compound has cardioprotective activity.

133. (New) The method of claim 132, wherein said cell is a mammalian cell, a yeast cell or a melanophore cell.

134. (New) The method of claim 132, wherein said G protein-coupled receptor is constitutively active.

135. (New) The method of claim 132, wherein said G protein-coupled receptor comprises the amino acid sequence of an endogenous receptor comprising the amino acid sequence of SEQ ID NO:2, SEQ ID NO:3 or SEQ ID NO:5.

136. (New) The method of claim 132, wherein the method comprises detecting a second messenger.

137. (New) The method of claim 136, wherein the second messenger is cAMP or IP₃.

138. (New) The method of claim 132, wherein the method comprises measuring pigment distribution in melanophore assay.

139. (New) The method of claim 132, wherein the method comprises measuring GTP γ S binding to membrane.

140. (New) The method of claim 132, wherein element (c) comprises:

- (i) contacting a compound which modulates the G protein-coupled receptor in (b) in vitro with a cardiomyocyte cell; and
- (ii) determining whether the compound modulates survival of the cardiomyocyte cell.

141. (New) The method of claim 140, wherein the method comprises measuring apoptosis of the cardiomyocyte cell.

142. (New) The method of claim 132, wherein element (c) comprises:

- (i) administering a compound which modulates the G protein-coupled receptor in (b) to a mammal; and
- (ii) determining whether the compound modulates cardiac function in the mammal.

143. (New) The method of claim 142, wherein the mammal is a rat or mouse model of heart disease.

144. (New) The method of claim 142, wherein element (ii) comprises evaluating a cardiovascular disorder, an ischemic heart disease, or a cardiovascular function in said mammal.

145. (New) The method of claim 132, wherein the candidate compounds are screened as pharmaceutical agents for congestive heart failure.

146. (New) The method of claim 145, wherein the screen is for an agonist of the GPCR.

147. (New) The method of claim 146, wherein the agonist is a partial agonist.

148. (New) A method comprising:

(a) administering a candidate compound to a non-human mammal having a genome comprising an inactivated mammalian RUP41 gene; and

(b) determining if said compound provides cardioprotection.

149. (New) The method of claim 148, wherein the non-human mammal is a rat, a mouse or a pig.

150. (New) A cultured cardiomyocyte cell comprising a recombinant nucleic acid encoding a G protein-coupled receptor comprising an amino acid sequence having at least 90% identity to SEQ ID NO:3.

151. (New) A non-human mammal having a genome that is modified to provide for selective expression of a G protein-coupled receptor comprising an amino acid sequence having at least 90% identity to SEQ ID NO:3 in cardiomyocytes.

152. (New) A non-human mammal having a genome that is modified to provide for selective inactivation of a mammalian RUP41 gene in cardiomyocytes.